Docket No.: O2911.0007/P043-D
(PATENT)

10-7-02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Patent Application of:
John R. Plate, et al.

Application No.: 09/335,377

Group Art Unit: 3616

Filed: June 17, 1999

Examiner: Eric D. Culbreth

For: FORKLIFT STABILIZING APPARATUS

APPELLANT'S BRIEF

Attention: Board of Patent Appeals and Interferences
Commissioner for Patents
Washington, DC 20231

Dear Sir:

This is an appeal pursuant to 35 U.S.C. § 134 and 37 C.F.R. §§ 1.191 et seq. from the Final Rejection of claims 20 and 21 in the above-identified reissue patent application. The fee for submitting this Brief ($320.00, 37 C.F.R. § 1.17(c)) is attached hereto. Any deficiency in the fees associated with this Brief should be charged to Deposit Account No. 04-1073. The Notice of Appeal was filed on May 28, 2002. Enclosed with this original are two copies.

This Brief contains items under the following headings as required by 37 C.F.R. § 1.192 and M.P.E.P. § 1206:

I. Real Party In Interest
II. Related Appeals and Interferences
III. Status of Claims
IV. Status of Amendments
V. Summary of Invention
VI. Issues
VII. Grouping of Claims

VIII. Arguments
IX. Conclusion
Appendix Claims

I. REAL PARTY IN INTEREST

The real party in interest for this appeal is Trak International, Inc., the assignee of this reissue patent application.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

A. Total Number of Claims in Application

There are 33 claims pending in this reissue patent application.

B. Current Status of Claims

1. Claims canceled: None
2. Claims withdrawn from consideration but not canceled: None
3. Claims pending: 1-33
4. Claims allowed: 1-19 and 22-33
5. Claims rejected: 20 and 21

C. Claims on Appeal

The claims on appeal are claims 20 and 21. The appealed claims are reproduced in the Appendix.

IV. STATUS OF AMENDMENTS

No Amendments have been filed since mailing of the Final Rejection on November 28, 2001, although a Request for Reconsideration was filed on May 28, 2002.

V. SUMMARY OF INVENTION

The invention relates to a vehicle that has a frame 12 with a support for supporting, pivoting and elevating a load 22. The vehicle also has an axle 62 connected to the frame for movement relative to the frame, and a system 82 for locking the axle relative to the frame when the frame tilted by more than a predetermined angle.

With reference to Figure 1 reproduced below, an embodiment of the vehicle (or forklift) 10 has a mainframe 12 and a telescoping boom 24 for manipulating a load 22. A carriage 28 is attached to the boom 24, and includes forks 30 for supporting the load 22.

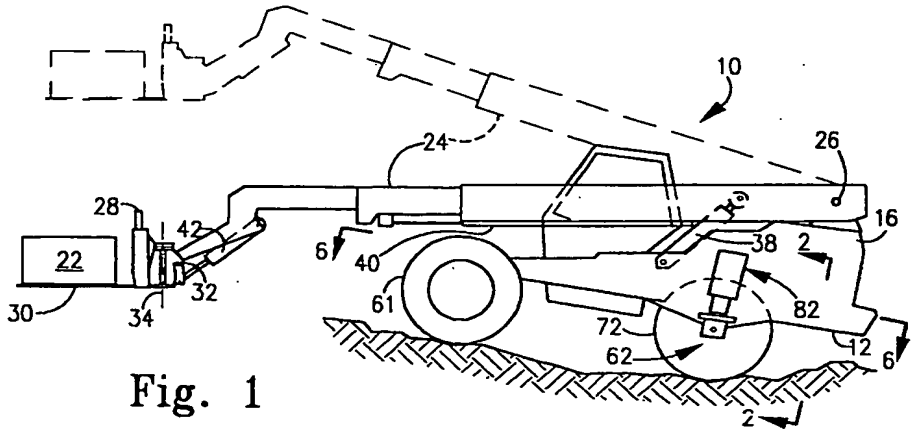


Fig. 1

With reference to Figure 2, the forklift includes a stabilizing apparatus 82 for reducing tipping or tilting, or for stabilizing the main frame 12. The stabilizing apparatus 82 includes right and left stabilizing assemblies 84, 84'. The stabilizing assemblies include cylinder assemblies 86, 86', and reciprocable rams 96, 96'. The rams 96, 96' include rounded ends 98, 98', which remain in nearly constant contact with plates 64, 66, respectively, during operation of the forklift 10. In Figure 2, the stabilizer apparatus is shown in a 'blocked' position. In this position, control valves 124, 124' block the exit of fluid from the cylinder assemblies 86, 86'. As a result, as the forklift passes over bump 130, retraction of ram 96 into cylinder assembly 86 is prevented, and the rear axle assembly is maintained in a fixed position relative to the frame 12.

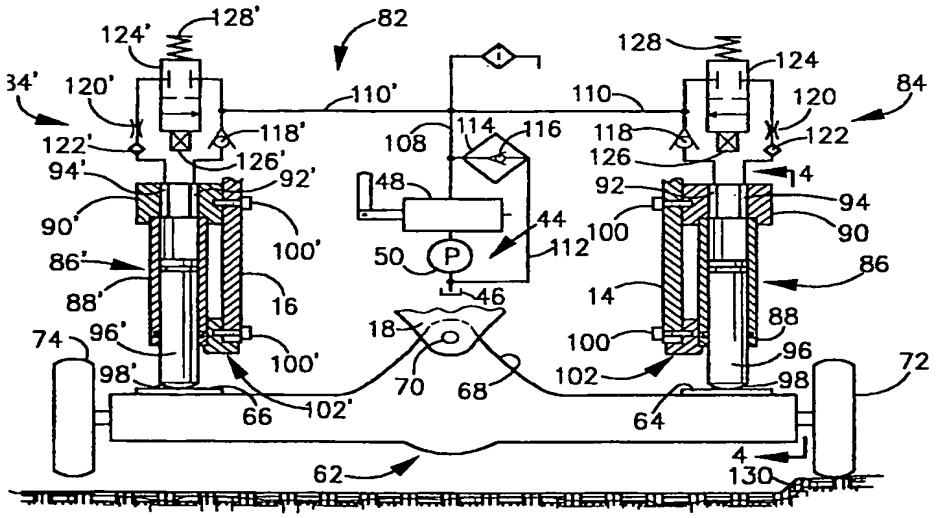


Fig. 2

Alternatively, flow control valves 124, 124' may be set in a second, 'unblocked' position. With reference to Figure 3 reproduced below, the rear axle assembly 62 is shown on an inclined surface. As the inclined surface urges the rear axle assembly to rotate in a clockwise direction, hydraulic fluid flow through check valve 118 permits ram 96 to extend from cylinder 88 so that ram end 98 remains in contact with plate 64. As explained in the specification, setting of the flow control valves 124, 124' in the blocked and unblocked

positions may be tied into the elevational position of the boom 24. For example, when the boom is above a certain angle, valves 124, 124' would be blocked to add stability to the forklift 10, and when the boom 24 is lowered, valves 124, 124' would be unblocked to allow tilting of axle assembly 62.

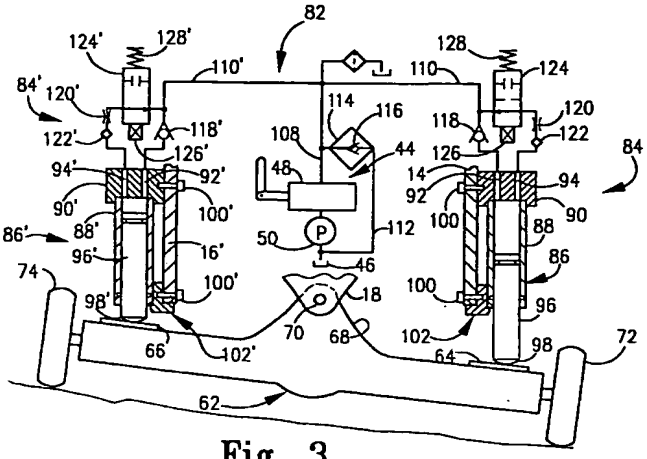
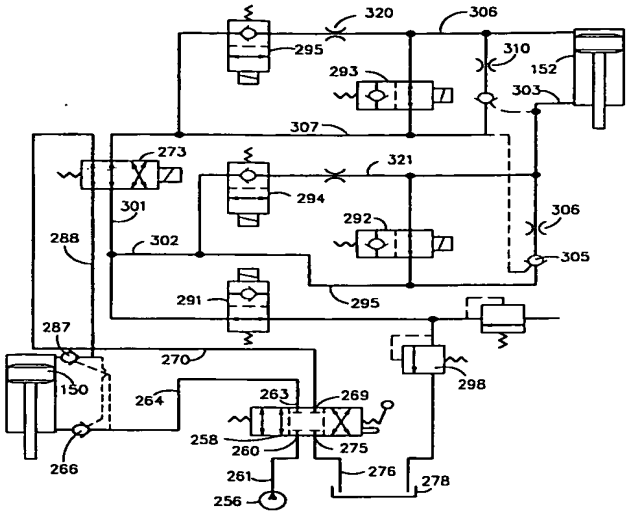


Fig. 3

FIG. 9



A feature of the invention is that frame tilting, when the flow valves are in an unblocked position, can be overridden if the vehicle 10 tilts more than a predetermined angle from vertical. With reference to Figure 9 reproduced above, an embodiment of the invention includes a hydraulic control system which controls flow of hydraulic fluid from pump 256 to the double acting frame tilt cylinder 150, which is connected to one end of the front axle assembly 52 and a second double acting frame stabilizer cylinder 152, connected to an end of the rear axle assembly 62. The control system also includes an inclination switch SW7 and solenoid valves 291'-295' (as illustrated in Figure 10, not shown). The inclination switch closes at a predetermined angle, locking the rear axle to provide a more stable platform and thereby minimizing the tendency of the vehicle 10 to tip. See column 14, lines 3-16 of the specification.

VI. ISSUES

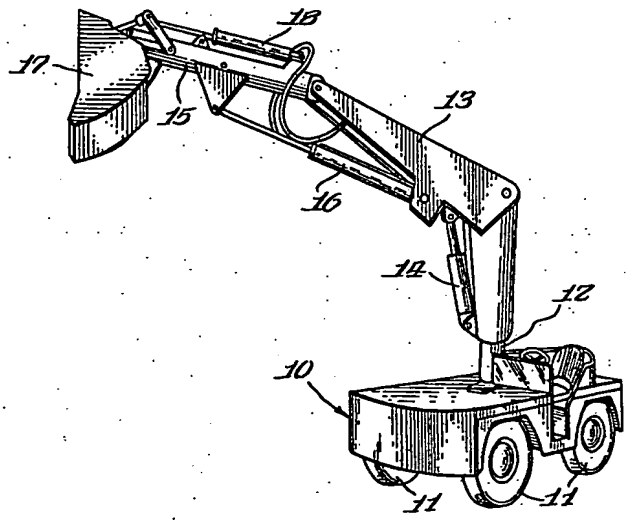
Should the rejection of claims 20 and 21 under 35 U.S.C. § 103 as being obvious over Schuetz in view of Laverda be reversed?

VII. GROUPING OF CLAIMS

The claims do not stand or fall together. The reasons why the claims are believed to be separately patentable are set forth below in the Argument section of this Brief.

VIII. ARGUMENTS

Schuetz refers to a leveling and suspension system for a wheeled material handler, with a frame 10, four wheels 11, and a pivoted shovel 17. The shovel 17 is mounted on an upright post 12 to swivel about a vertical axis (column 1, lines 56-59). The wheels 11 can be individually controlled by respective hydraulic cylinders 25, to level the frame 10 when the wheels are "resting on sloping or uneven ground" (column 2, lines 54-57), such that the pivoted device 17 swings "in a horizontal plane" during "ditching,



digging or other similar operations" (column 1, lines 14-20). Schuetz is concerned with leveling its wheels after the vehicle has stopped, to level the frame prior to a digging operation.

When the Schuetz material handler is moving across the terrain (i.e., during transport), the cylinders 25 are unblocked such that the frame 10 is movably supported on the wheels 11 by respective torsion bars 20 (column 4, lines 9-16). When the Schuetz machine is in a resting position, the cylinders 25 are used to level and lock the frame 10 relative to the wheels 11. When the material handler is being transported from place to place, the wheels 11 are freed from the operation of the cylinders 25, such that the wheels "move against their springs [20] in the usual manner" (column 4, lines 18-25).

Laverda refers to a threshing-harvesting machine. The Laverda combine has a body 1 with a front appendage 1a which is pivotally connected to a front axle 3. The body 1 has lateral brackets 4, 4', and cylinders 5, 5'. The Laverda machine also has a hydraulic system for automatically leveling the machine body 1.

FIG. 1

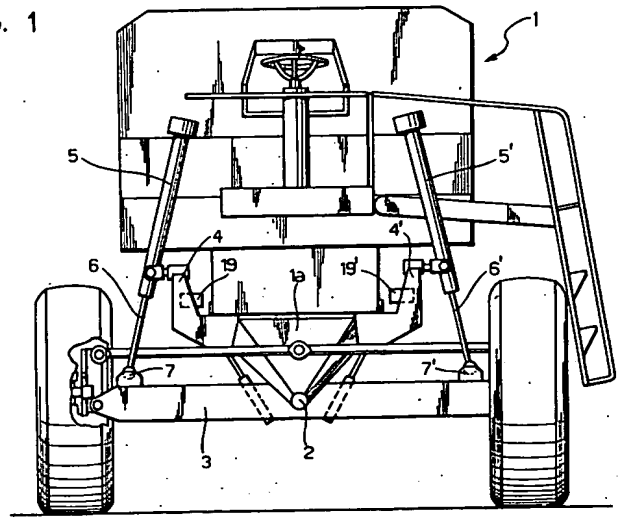
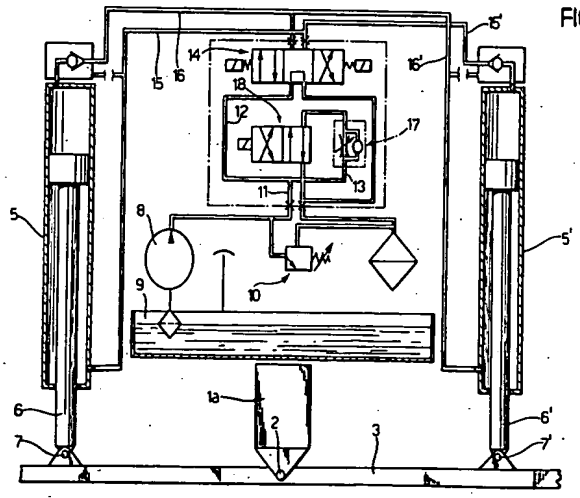


FIG.2



In particular, the Laverda machine has float switches 20, 21 and 20', 21' (Figure 2) which function to automatically close electro-valves 14, 18 when the body 1 of the machine inclines more than 10 degrees with respect to the horizontal. As such, the entire output of pump 8 passes through electro-valve 14 (bypassing a flow-restrictor) and is supplied to the cylinders 5, 5'. Column 3, lines 26-40. The Laverda machine also has limit switches 34, 34' which are operated automatically when the inclination of the machine body with respect to the horizontal reaches a maximum limit of safety. In this case, electro-valves 14, 18 "remain in their rest positions and the hydraulic circuit is inoperative," and "[a]utomatic leveling control therefore ceases." Column 3, lines 40-50.

Claim 20 recites a vehicle comprising a "support for supporting a load, [the] support being pivoted to elevate the load relative to [a] frame." Claim 20 further recites an "an axle connected to [the] frame for movement relative thereto; and a system for locking [the] axle relative to [the] frame when [the] frame is tilted by more than a predetermined angle." Schuetz and Laverda fail to disclose or suggest these claim elements in the recited combination. The Examiner contends that it would have been obvious to employ the Laverda leveling system in the Schuetz material handler. As discussed in detail below, however, the references provide no adequate motivation for such a modification.

Schuetz discloses a wheeled material handler, with a frame, four wheels and a pivoted shovel. When the Schuetz material handler is moving across the terrain (i.e., during transport), the cylinders 25 are unblocked such that the frame is movably supported on the wheels by torsion bars 20. In other words, when the material handler is being transported from place to place, the wheels 11 are freed from the operation of the cylinders 25, such that the wheels "move against their springs in the usual manner." The cylinders 25 are only used to level the frame relative to the wheels when the Schuetz machine is in a resting stationary position.

Laverda suggests the desirability of maintaining the main body of a moving combine in a level condition. Neither reference suggests any reason why the Laverda automatic leveling system should be considered applicable or advantageous to a material handler of the type shown by Schuetz. Combines of the type disclosed by Laverda are operated on the move. Ditchers and diggers of the type taught by Schuetz are operated in a stand-still position (Schuetz, column 1, lines 16-20). Without the benefit of Appellants' disclosure, there is no reason why a system for automatically controlling the orientation of the main body of a combine should be considered applicable to a material handler of the type taught be Schuetz.

Further, the Schuetz material handler suggests no need for the Laverda limit switches 34, 34'. The Laverda system functions in a dynamic environment; as explained above, switches 34, 34' engage to shut-off the automatic leveling system when the Laverda harvester moves over a surface that causes inclination of its body to reach a maximum level of safety. To the contrary, the Schuetz digger uses a suspension system when moving, and only utilizes a leveling system once the vehicle stops. After the Schuetz digger stops in an inclined position, the leveling system operates to level its frame. Laverda starts out level and senses for the frame to tilt to an unsafe position, whereby its axle operates the limit switches to shut-off its leveling system. This type of system has no applicability to Schuetz. Therefore, it makes no sense to use the dynamic switch-type system of Laverda with the stationary leveling system of Schuetz.

A person skilled in art would never have thought to combine the two references. Schuetz is explicitly directed at a digging machine with a leveling and suspension system wherein a frame has four independently moving wheels. Indeed, Schuetz states that its invention relates to a system "which provides *individual* vertical movement of the wheels for leveling of the vehicle." Column 1, lines 10-12, emphasis added. To the contrary, Laverda's leveling system is for a harvester which does not employ wheels having individual movements, but rather a leveling system that operates by tilting an axle to which opposing wheels are attached. Although the two references are directed at leveling systems, the type

and function of the leveling systems are so different that this could not be a basis for a person skilled in the art to combine the references.

The Examiner's bare statement that Schuetz discloses "A," Laverda discloses "B," and thus it would have been obvious to combine the two fails to meet the Examiner's burden of factually supporting any *prima facie* conclusion of obviousness. The record is void of any valid assertion of motivation to combine Schuetz and Laverda. The only attempt to explain why such a combination would have been made asserts that it would have been obvious to "modify Schuetz ... to include a leveling and locking system as taught by Laverda in order to prevent the vehicle from assuming an unsafe position." But Schuetz *does* teach a leveling system; that is the thrust of Schuetz. Moreover, Schuetz teaches a locking system, where the "actuating unit is locked to hold the wheel in an adjusted position." Column 1, lines 35-36. Moreover, Laverda does not teach a "locking system" as asserted by the Examiner, but rather a system that shuts off automatic leveling control. Column 3, lines 49-51.

There is no reasonable motive found in Schuetz to add to its machine another leveling and locking system. And, as explained above, the Schuetz system is one in which four wheels are independently movable. This system makes the Schuetz machine more nimble for movement over rough terrain which is typically encountered when moving around ditch digging sites. Laverda's axle-type system is opposite; it is a more integrated system designed for moving over more level terrain, such as corn fields, encountered when harvesting. The combination proposed by the Examiner is not practicable, much less "obvious."

For at least these reasons, claim 20 should be allowed. Claim 21 depends from claim 20 and contains every limitation of claim 20, and should be allowed for at least the reasons for allowance of claim 20, and for other reasons. Please note in addition that claim 21 specifically recites a "sensor" for sensing "when" the frame is tilted by more than the predetermined angle. There is nothing in the references to suggest that a sensor that

responds to tilting would have any applicability to a stationary ditch digger of the type disclosed by Schuetz, and the Examiner provides no argument or evidence to the contrary.

IX. CONCLUSION

For at least the foregoing reasons, the Appellants respectfully request this honorable Board to reverse the rejection on appeal.

Dated: September 30, 2002

Respectfully submitted,

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APPENDIX A

Claims Involved in the Appeal of Application Serial No. 09/335,377

20. A vehicle comprising:

a frame;

a support for supporting a load, said support being pivoted to elevate the load relative to said frame;

an axle connected to said frame for movement relative thereto; and

a system for locking said axle relative to said frame when said frame is tilted by more than a predetermined angle.

21. The vehicle of claim 20, further comprising a sensor for sensing when said frame is tilted by more than said predetermined angle.